

Claims

- [c1] 1. An electrical armature comprised of a core having a plurality of pole teeth extending radially from a circular ring portion, a plurality of winding coils each encircling a respective one of said pole teeth, the coil windings on adjacent of said pole teeth being wound such that the radial extent of the windings relative to an axis of the respective pole tooth is not the same at all positions along the length of said pole tooth axis and the radially outermost winding of at least one of said adjacent pole teeth extends across an axially extending plane positioned equidistant between said adjacent pole teeth.
- [c2] 2. An electrical armature as set forth in claim 1 wherein the radial extent of the windings relative to an axis of the respective pole tooth tapers from one end of the pole tooth to the other.
- [c3] 3. An electrical armature as set forth in claim 2 wherein the tapers of the radial extent of the windings of adjacent pole teeth are in opposite directions.
- [c4] 4. An electrical armature as set forth in claim 1 further including an insulator covering at least one axial outer

face of the pole teeth, the coil windings wound around said magnetic pole teeth having said insulator interposed therebetween, each of said insulators having at least one surface inclined relative to a radial plane perpendicular to the rotational axis of said rotating electric machine so that said magnetic pole teeth cores have a differing thickness in an axial direction along their length.

- [c5] 5. An electrical armature as set forth in claim 4 wherein the insulators of each of the adjacent pairs of pole teeth have a different configuration.
- [c6] 6. An electrical armature as set forth in claim 5 wherein the inclination of each insulator is such that the wire of the coil winding will be caused to slip axially of the pole teeth as it is wound without having to otherwise move the wire in an axial direction during winding.
- [c7] 7. An electrical armature as set forth in claim 6 wherein the insulator of one of the pair of adjacent pole teeth has a substantially greater taper at one of its ends than at its other end.
- [c8] 8. An electrical armature as set forth in claim 7 wherein taper of the insulator of the one of the pair of adjacent pole teeth has a taper only at the one of its ends.
- [c9] 9. An electrical armature as set forth in claim 7 wherein

the greater taper at one of the ends of the insulator of one of the pair of adjacent pole teeth is also substantially greater than the taper of the insulator of the other pole tooth of the adjacent pair.

[c10] 10.A method of winding an electrical armature comprised of a core having a plurality of pole teeth extending radially from a circular ring portion, winding an electric wire around a first of said pole teeth to form a plurality of winding coils the radial extent of which relative to an axis of the respective pole tooth is not the same at all positions along the length of the wound pole tooth axis so that the radially outermost winding extends across an axially extending plane positioned equidistant between adjacent pole teeth.

[c11] 11.A method of winding an electrical armature as set forth in claim 10 further comprising the step of winding the pole tooth adjacent the already wound pole tooth to form a plurality of winding coils the radial extent of which relative to an axis of the respective pole tooth is not the same at all positions along the length of the wound pole tooth axis so that the radially outermost winding extends across an axially extending plane positioned equidistant between adjacent pole teeth and is spaced from the radially outermost winding of the first wound pole tooth in a direction along the radius of the

armature.

- [c12] 12.A method of winding an electrical armature as set forth in claim 11 wherein the radially outermost winding of the first wound pole tooth is at one end thereof and the radially outermost winding of the second wound pole tooth is at the other end thereof.
- [c13] 13.A method of winding an electrical armature as set forth in claim 10 wherein a first of a plurality of adjacent pairs of pole teeth are wound and then the other of the of the plurality of adjacent pairs of pole teeth are wound.
- [c14] 14.A method of winding an electrical armature as set forth in claim 13 wherein the radially outermost winding of the first wound pole teeth is at one end thereof and the radially outermost winding of the second wound pole teeth is at the other end thereof.